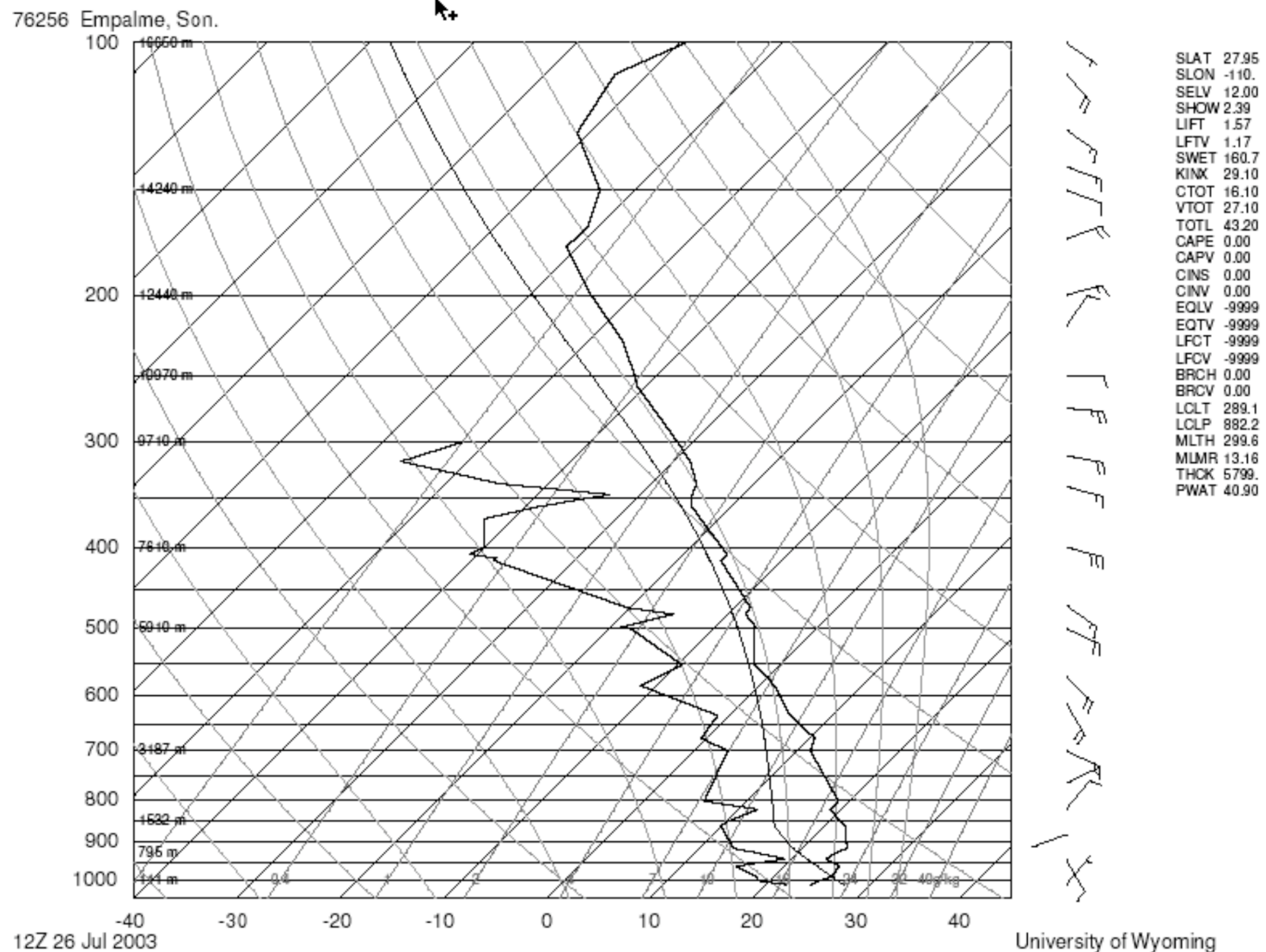


# **Things that seemed, to me personally, partially or totally counterintuitive during 2003**

**Martin Murphy**

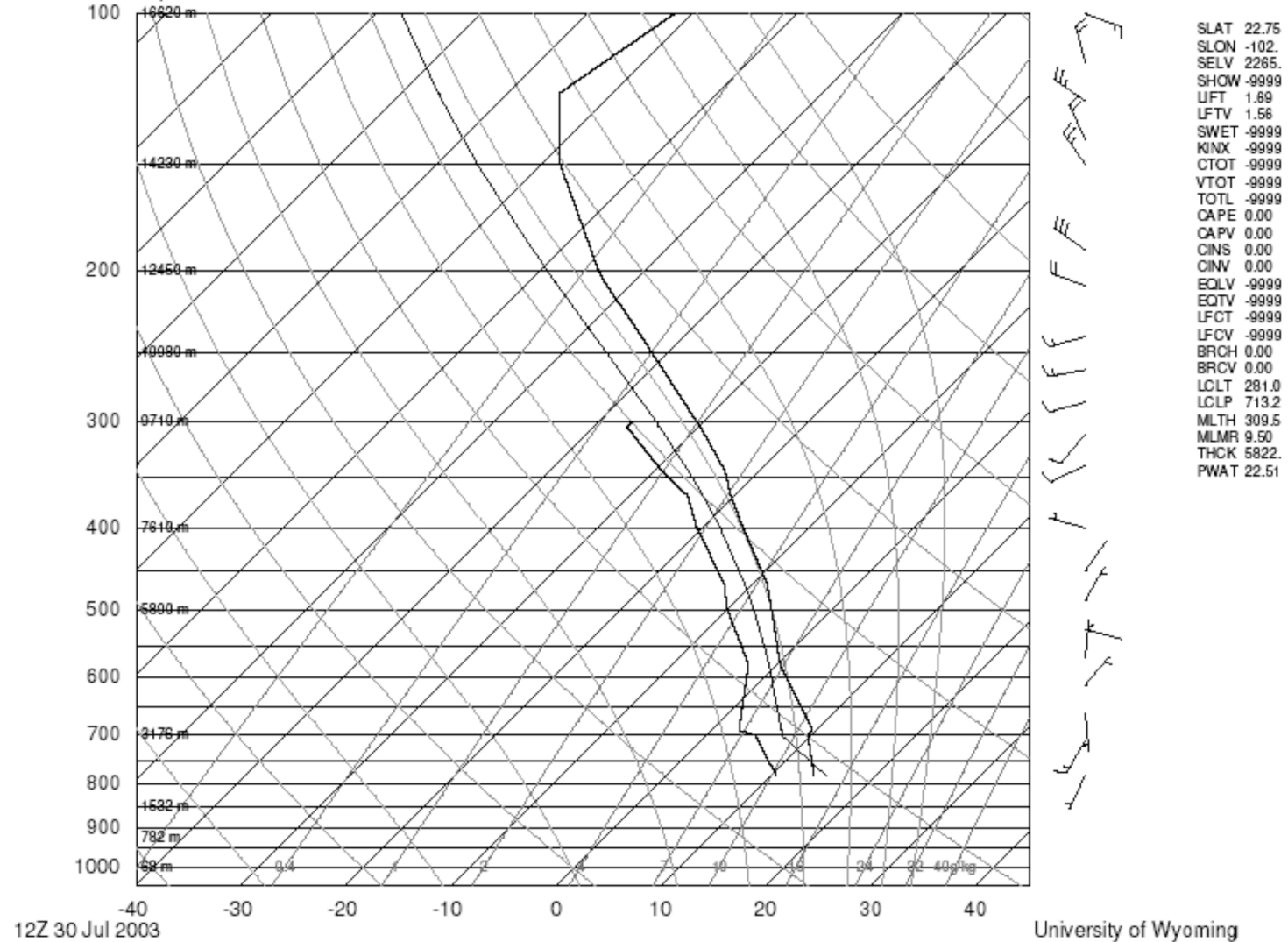
- **big days in zone IX vs zones VI-VII**
- **dry air aloft associated with inverted troughs and “easterly jets”**
- **back-door cold fronts in New Mexico**
- **long, “strung-out” ridges**

**Big day in zone VI:**  
**Expectation: directional shear between lower and upper levels needed to get storms over Sierra Madre to**  
**organize and move down into deserts/coastal areas overnight.**



**Big day in zone IX:  
Expectation: more CAPE!  
and steering-level flow to push storms off high terrain (partially met)**

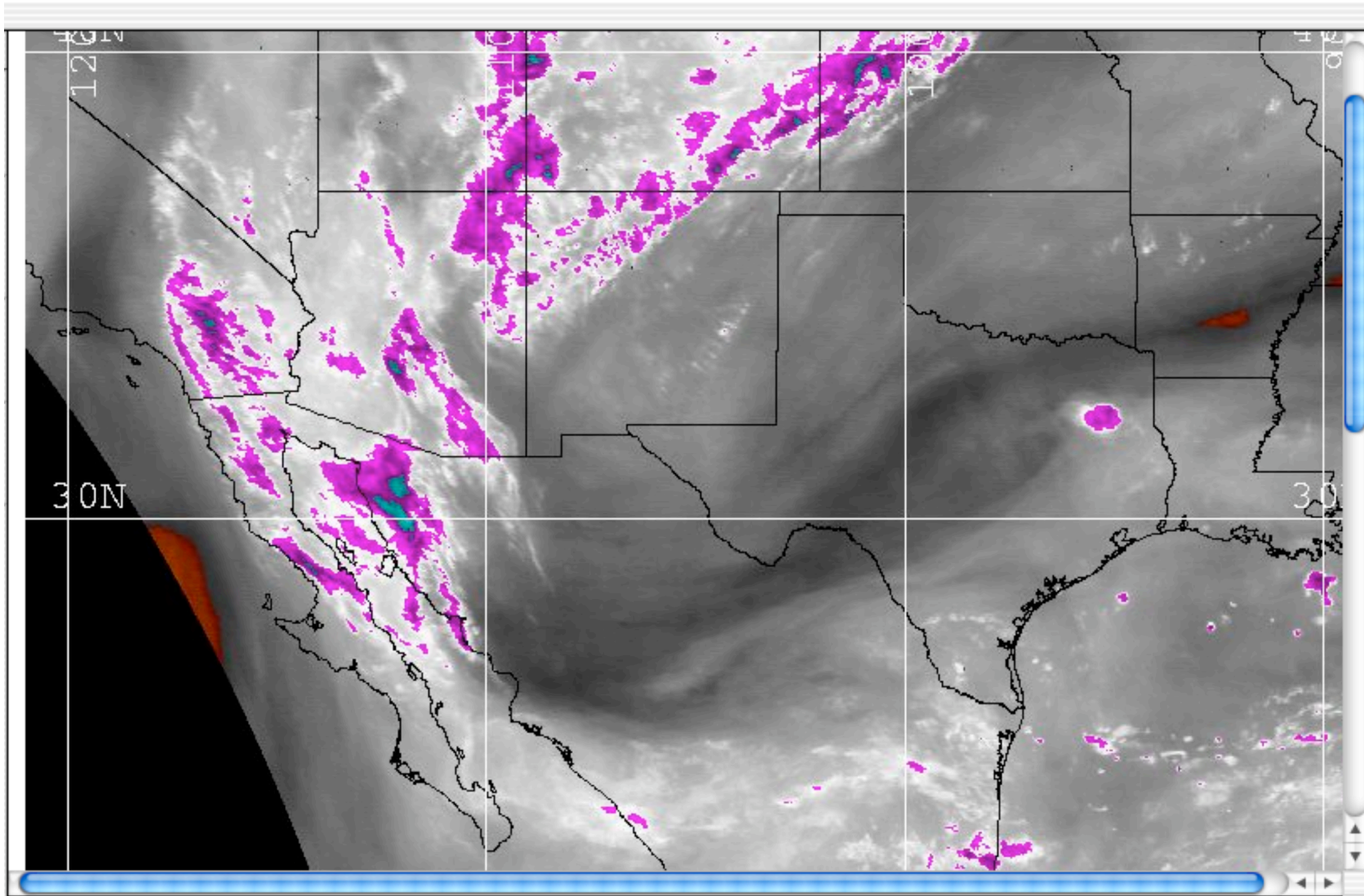
76526 Guadalupe



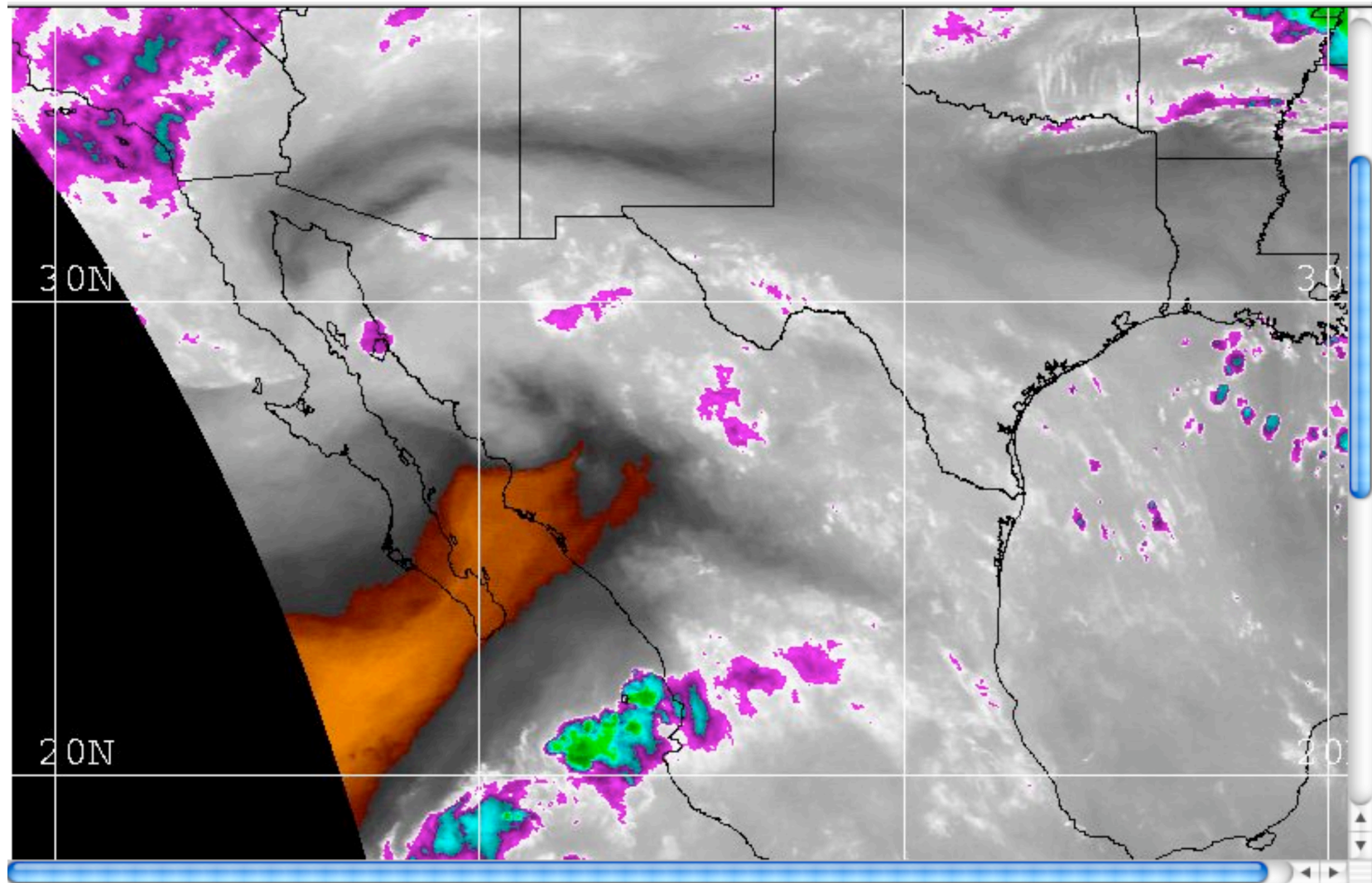
**The near anti-correlation between big days in zones VI-VII and zone IX was not totally unexpected although the lack of instability over IX was  
Zone VIII seems to be have big days under a variety of conditions**

ZONE	7-1 9	7-2 0	7-2 1	7-2 2	7-2 3	7-2 4	7-2 5	7-2 6	7-2 7	7-2 8	7-2 9	7-3 0	7-3 1	8-1	8-2	8-3	8-4	8-5	8-6	8-1 3	8-1 4	8-1 5	8-1 6	8-1 7	8-1 9	8-2 0	8-2 1	8-2 2	8-2 3	8-2 4	8-2 5	8-2 6	8-2 7		
VI			X		X		X	X		X									X	X						X			X	X		X			
VII	X	X	X		X	X	X	X				X	X					X	X		X			X		X	X	X	X	X					
VIII	X	X			X	X	X	X	X			X	X	X		X		X	X		X					X	X			X	X	X	X		
IX										X	X	X	X	X								X		X						X	X	X			

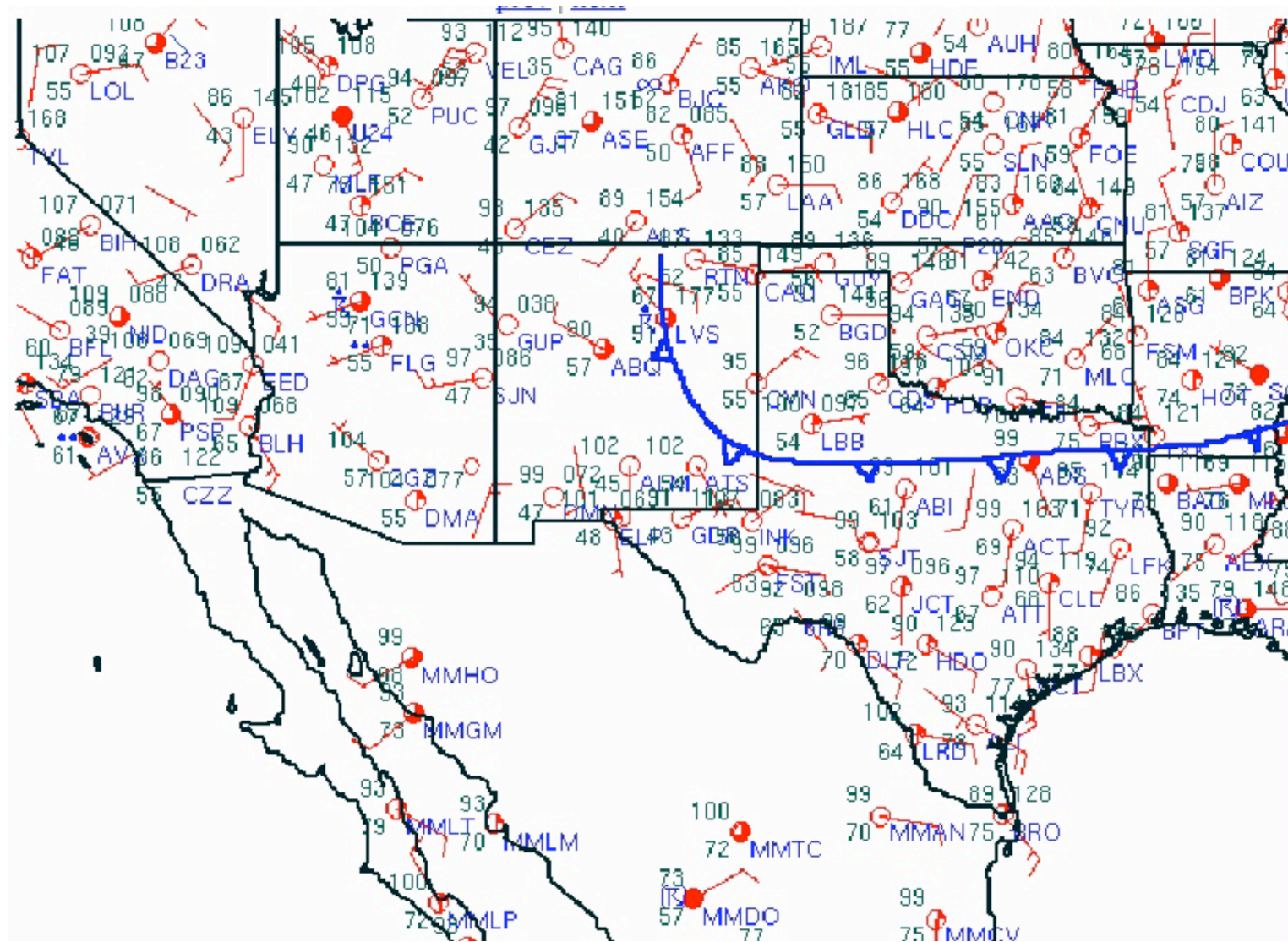
**A little dry air aloft, when coming from N and E, can be a good thing:  
7-26-2003 was a big day for zones II, IV, VI, VII, VII  
(perhaps it allows good insolation? a little cold advection aloft? stronger storms?)**



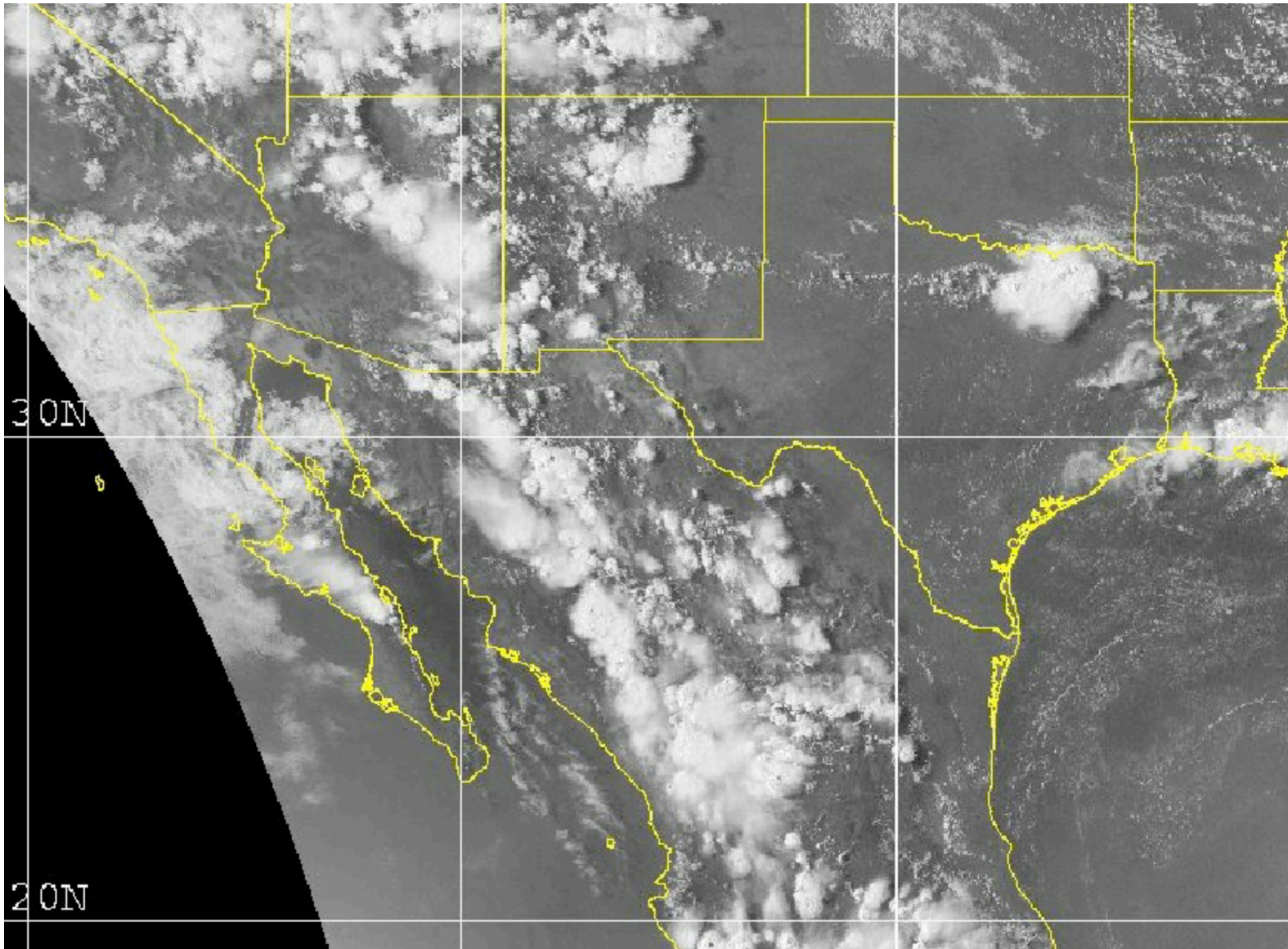
**contrast 7-26-2003 with a stronger/deeper outbreak of dry air aloft on 7-29:  
this dry intrusion completely shut down zones VI-VII-VIII**



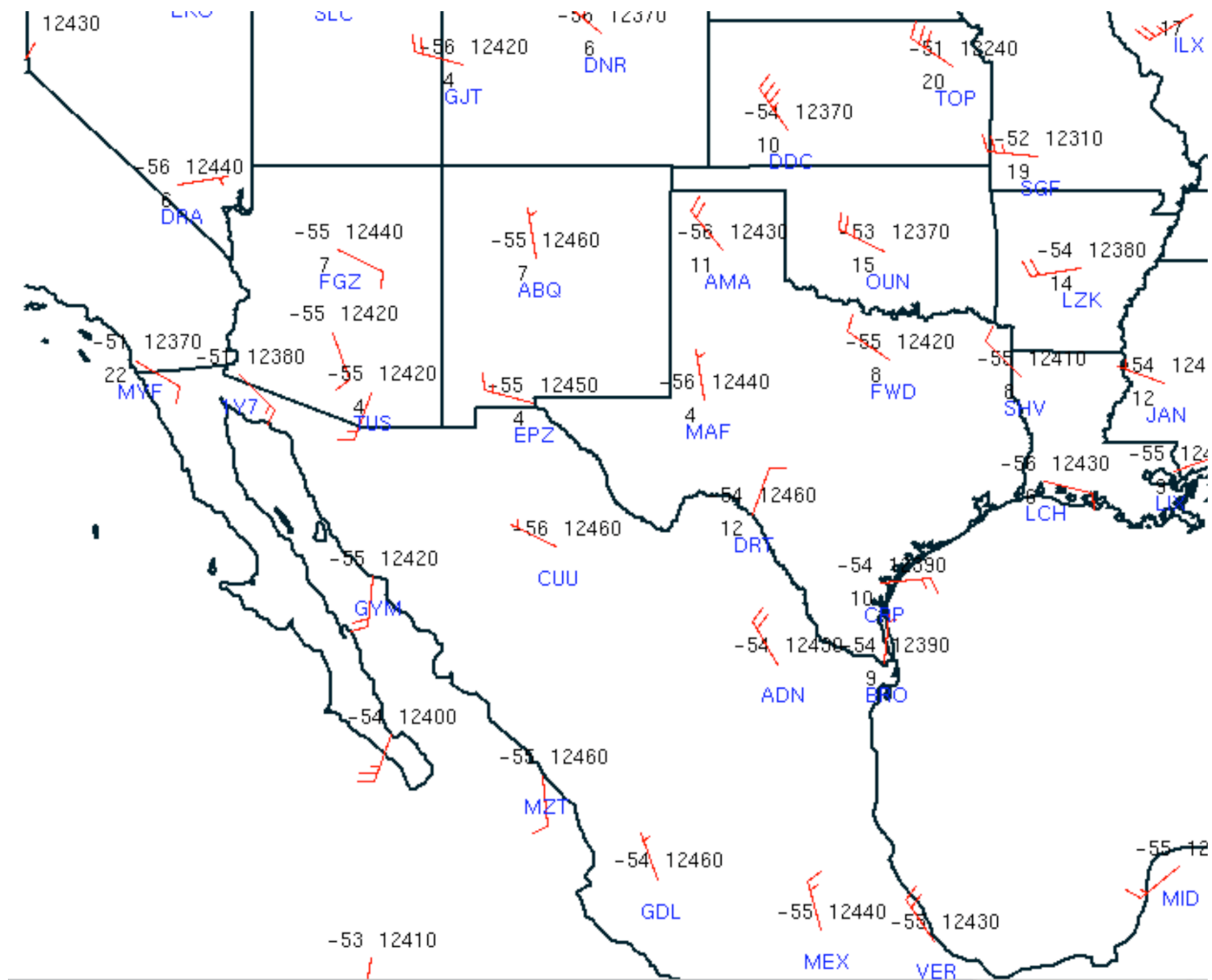
**My expectation: big day (category 4) Reality: category 1**



**little action along 7-22 front: one storm complex over DFW, another near/over Sangre de Cristo Mtns (possibly facilitated by backdoor front??)**



**Elongated ridges can make for big days all over:  
7-31-2003 cat 3s and 4s observed on either side of ridge lying over Continental Divide**



**contrast that with being right under a high (8-6-2003):  
almost nothing in zones I-VI and IX, despite similar heights, winds, dewpoint deps  
(in fact, somewhat wetter air at mid-levels on 8-6 than on 7-31!)**

